REMARKS

In reply to the Office Action dated May 4, 2004, reconsideration is respectfully requested. Claims 8 and 105-117 are currently under examination in the Application. Applicants thank the Examiner for acknowledgement of the Information Disclosure Statements filed February 6, 2002 and November 7, 2002. However, Applicants note that Reference AG from the Supplemental IDS filed November 7, 2002 was left uninitialed. Applicants respectfully request acknowledgment of this reference and enclose herewith a copy of Form PTO-1449 for the Examiner's convenience.

By the above amendment, claim 8 has been amended to correct a typographical error. More particularly, the subject matter elected by Applicants in their June 30, 2003, response to the Examiner's Restriction Requirement was directed to Group I and the sequence CDAEC (SEQ ID NO: 910). However, in Applicants' amendment filed February 6, 2004, the claims were incorrectly amended to recite modulating agents of the formula:

$$(Z_1)\text{-}(Y_1)\text{-}(X_1)\text{-}(W)\text{-}(X_2)\text{-}(Y_2)\text{-}(Z_2);$$

wherein W is the tri-peptide DAE; X_1 is C and X_2 is E. Thus, the claims, as amended, were inadvertantly directed to a cyclic peptide modulating agent comprising the sequence CDAE**E**, rather than the elected subject matter comprising the sequence CDAE**C**. Accordingly, the present amendment to claim 8 merely corrects this error by defining X_2 as C, rather than E.

Claims 8 and 105-117 stand rejected under 35 U.S.C. § 112, first paragraph, as subject matter which was not described in the specification in such a way as to enable one of skill in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to the Examiner, the specification does not provide evidence that cyclic peptides comprising the sequence DAE are capable of modulating cell adhesion nor that CDAEC (SEQ ID NO: 910), whether as a linear or cyclic sequence, is known to be capable of modulating cadherin-5-mediated cell adhesion.

Applicants respectfully traverse this rejection. As noted above, the currently claimed invention is drawn to a cyclic peptide modulating agent comprising the cadherin-5 CAR sequence CDAEC (SEQ ID NO: 910). Accordingly, the relevant inquiry under 35 U.S.C. 112,

first paragraph, is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). Applicants further note that compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed. Indeed, the specification need not contain a working example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation. *In re Borkowski*, 422 F.2d 904, 908, 164 USPQ642, 645 (CCPA (1970).

Applicants submit that the specification as originally filed more than adequately satisfies the enablement standard of 35 U.S.C. 112, first paragraph. First, Applicants have identified and disclosed in the subject application the cadherin-5 cell adhesion recognition sequence (CAR), DAE, which is contained within the cadherin-5 protein and which, when present in a peptide-based modulating agent according to the present invention, can modulate cell adhesion that is mediated by cadherin-5 (e.g., pg. 5, line 26 to pg. 6, line 12; e.g., pg. 7, line 28 to pg. 8, line 10). The specification as filed further identifies numerous illustrative examples of cadherin-5 CAR sequences which contain this DAE CAR sequence and which may be used in the context of modulating agents according to the invention, including both linear and cyclic peptide modulating agents (e.g., pg. 7, line 28 to pg. 8, line 10; pg. 48, line 21 to pg. 49, line 20). In addition, Applicants have demonstrated, by way of specific experimental example, that one such illustrative peptide modulating agent, having the sequence VFRVDAETG, which comprises the cadherin-5 CAR sequence, DAE, is in fact effective for modulating endothelial cell adhesion (Example 3, pg. 146, line 10 to pg. 147, line 10). Applicants submit that the skilled artisan, in view of this disclosure, could readily make and use the claimed cyclic peptides comprising the sequence CDAEC without undue experimentation and, furthermore, would reasonably expect that such cyclic peptides would be effective for modulating cadherin-5-mediated cell adhesion, irrespective of the lack of a specific working example in the specification as filed.

In further support of the enabling nature of the presently claimed invention, Applicants submit herewith the Declaration of Orest Blaschuk, Ph.D., confirming what was

clearly disclosed in the application as originally filed, that cyclic peptides comprising the sequence CDAEC can be used for modulating cell adhesion.

Accordingly, in view of the disclosure in the specification as originally filed, coupled with the general level of knowledge and skill in the art of cell adhesion molecules and the use of CARs in the modulation of cell adhesion, and further in view of the confirmatory evidence provided for the Examiner in the enclosed Declaration of Dr. Blaschuk, the skilled artisan could indeed have made and used the claimed invention at the time of filing without undue experimentation and with a reasonable expectation of success. Accordingly, Applicants submit that the claimed invention fully satisfies 35 U.S.C. 112, first paragraph, and request reconsideration and withdrawal of the Examiner's rejection.

The Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now believed to be in condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

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Enclosures:

Postcard
Copy of Form PTO-1449 from Supplemental IDS of November 7, 2002
Declaration of Orest W. Blaschuk, Ph.D.
Curriculum Vitae of Orest W. Blaschuk
Figures 1-4 (Attachment B of Blaschuk Declaration)

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